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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/512,394	02/24/2000	Kyou-Yoon Sheem	3364.P039	5787

7590

11/18/2002

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EXAMINER

MERCADO, JULIAN A

ART UNIT

PAPER NUMBER

1745

DATE MAILED: 11/18/2002

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/512,394

Applicant(s)

SHEEM ET AL

Examiner

Julian Mercado

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-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2002 .
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 11-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Remarks

This Office Action is responsive to Applicant's amendment filed September 4, 2002.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al. in view of either Yamada et al. or Peled et al.

The rejection is maintained for the reasons of record and will not be reiterated. The scope of claims 6-10 is unamended from that considered in the previous Office Action.

Applicant's arguments have been fully considered, however they are not persuasive. Applicant submits that Ueda does not teach "a carbon shell being an intermediate structure between an amorphous structure and a crystalline structure." [emphasis in original, and of note as required by the amendment to claim 1] This argument is not persuasive, as a carbon shell being an intermediate structure between an amorphous structure and a crystalline structure is outside the scope of claims 6-10.

Arguments against Yamada and Peled, to the extent that they may be applicable towards claims 6-10, appear to be directed to these reference failing to remedy alleged differences between the Yamada Patent and the present claims. However, in view of the rejection based on

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Ueda being maintained for the reasons discussed above, the rejection in view of either Yamada or Peled is subsequently maintained for the reasons discussed in the previous Office Action.

The examiner notes that Applicant refers to claims 2-10 as being dependent on independent claim 1. (last paragraph, p. 4 of response) As a matter of clarification, it is noted that claim 6 is an independent claim having its own set of claims 7-10 dependent therefrom.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al. in view of either Yamada et al. or Peled et al, and further in view of Mao et al. (U.S. Pat. 5,972,537).

The rejection is maintained for the reasons of record and for the additional reasons to follow. It is noted that the scope of independent claim 1 has been amended so as to recite "a carbon shell being an intermediate structure between an amorphous structure and a crystalline structure." Applicant's arguments as noted above, to the extent that they are applicable towards claims 1-5, have been fully considered, however they are not persuasive.

With respect thereto, in one respect an amorphous carbon shell would teach or at least suggest the amended limitation as an amorphous shell falls within the range of "an amorphous structure and a crystalline structure", i.e. the claimed range between an amorphous and crystalline structure is inclusive of its endpoints. Thus, the amorphous carbon shell as relied upon in the previous rejection is considered to read on "a carbon shell being an intermediate structure between an amorphous structure and a crystalline structure."

Additionally, in another respect, the amorphous carbon [312] in Ueda is disclosed as being of "low crystallinity or amorphous carbon layer". (see, for example, col. 4 line 64 or col. 8

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line 10-13) It is the examiner's position that this teaching of a "low crystallinity or amorphous carbon layer by Ueda is in reference to a carbon layer having a continuum in structure ranging from, e.g. amorphous, semi-crystalline and crystalline forms. In support thereof, Mao is relied upon to teach that "carbon materials are substantially amorphous, although it will be appreciated that they could be partially or completely crystalline or amorphous but possessing crystalline inclusions." (col. 3 line 7-10) The skilled artisan would find obvious, therefore, that the amorphous carbon [312] in Ueda would naturally flow to have a structure that is somewhere between "a carbon shell being an intermediate structure between an amorphous structure and a crystalline structure", more so in view of the scope of the present amendment not precluding an arguably fully amorphous or a fully crystalline carbon shell.

Arguments against Yamada and Peled, to the extent that they are applicable towards claims 1-5, appear to be directed to these reference failing to remedy alleged differences between the Yamada Patent and the present claims. However, in view of the rejection based on Ueda being maintained for the reasons discussed above, the rejection in view of either Yamada or Peled is subsequently maintained for the reasons discussed in the previous Office Action.

Double Patenting

Claims 1-10 are rejected under the judicially created doctrine of double patenting over claims 1-9 of U. S. Patent No. 6,355,377 B1 and over claims 1-7 of U.S. Patent No. 6,395,427 B1 since the pending claims, if allowed, would improperly extend the "right to exclude" already granted in each patent.

The subject matter claimed in the instant application is fully disclosed in the '377 and '427 Patents and is covered by each patent since each patent and the application are claiming common subject matter, as follows: the '377 Patent and the '427 Patent recite a negative active material having a crystalline carbon core having a semi-crystalline carbon shell formed around the core. (independent claim 1 for both Patents) The '377 Patent and the '427 Patent recite a metal such as a transition metal, alkali metals, alkali earth metals and semi-metals. (claim 3 and claim 2, respectively)

Furthermore, there is no apparent reason why Applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the applications which matured into the '377 and '427 Patents. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian Mercado whose telephone number is (703) 305-0511. The examiner can normally be reached on Monday through Friday.

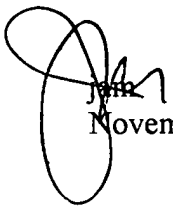
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (703) 308-2383. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



November 12, 2002



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